

ABSTRACT

Dominant negative alleles of human mismatch repair genes can be used to generate hypermutable cells and organisms. By introducing these genes into cells and transgenic animals, new cell lines and animal varieties with novel and useful properties can be prepared more efficiently than by relying on the natural rate of mutation. These methods are useful for generating genetic diversity within genes encoding for therapeutic antigens to produce altered polypeptides with enhanced antigenic and immunogenic activity. Moreover, these methods are useful for generating effective vaccines.